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Richard J. Ward, Jr.

Appl No. : 10/004,046 Confirmation No. 8765
Applicant : Kinya Washino, et al.
Filed : October 24, 2001
Title : MULTI-FORMAT AUDIO/VIDEO PRODUCTION SYSTEM

TC/A.U. : 2714
Examiner : Harvey
Old Docket No.: FN1-02604/03

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Technology Center 2600

RESPONSE TO OFFICE ACTION

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Post Office Box 7068
Pasadena, CA 91109-7068
May 26, 2004

Commissioner:

In response to the Office Action mailed November 26, 2003, the Examiner's attention is directed to the following remarks. An incomplete copy of the Office Action was initially mailed on August 13, 2003. After contact with the Office, the full text was mailed on November 26, 2003.

I.

Applicant notes that the detailed Action is comprised of five sections as follows: I. Preface to Office Action; II. Election/Restrictions; III. Section 112 rejections; IV. Section 102 rejections and IV. [sic] Section 103 rejections.

Appln No. 10/004,046

Amdt date May 26, 2004

Reply to Office Action of November 26, 2003

As will be evident in the body of this response to the Office Action, Applicant's response to the characterization of the state of the art and to the characterization of Applicant's invention will be provided in detail throughout the response in addressing the substantive rejections. With respect to the Election/Restrictions portion of the Office Action, Applicant has traversed the "constructive election" indicated by the Examiner and has traversed the species that has been selected by the Examiner and the claims readable thereon. In traversing the "constructive election," Applicant has provided a substitute election and has listed the claims that are readable on its election of the species of FIG. 7.

As a result of Applicant's substitute election, certain claims elected by Applicant have been substantively examined and other claims have not. Similarly, certain claims elected and examined by the Examiner are non-elected by Applicant and Applicant has not addressed their rejection in this response. In summary, this response to the Office Action will respond to those claims Applicant has elected and which have had substantive examination, namely, claims 60, 61-73, 95, 96, 97-108.

What follows next is Applicant's response to the Examiner's "constructive election." Following that, Applicant responds to the Section 112 rejections in Section III. of the Office Action. The remaining portions of the Office Action are directed to the responses to the Section 102 and Section 103 rejections.

Appln No. 10/004,046

Amdt date May 26, 2004

Reply to Office Action of November 26, 2003

II.

Applicant respectfully traverses, and disputes the propriety of the ruling of "constructive election" by Applicant of the species of FIG. 4. That ruling is stated at page 6 of the "Detailed Action" remarks in the Office Action dated November 26, 2003.

The Office Action notes ("Disposition of Claims" in Form PTO-326 included in the action) that claims 1, 26-33 and 36-255 are in the application as taken up for action. Because those claims were present in the application months before the Office's issuance of the action of November 26, 2003, there can be no constructive election of claims by applicants.

The Index to MPEP (see Elections - Constructive) shows that constructive election is dealt with at MPEP 818.02 (a) and (c). MPEP 818.02 (a)'s first paragraph governs as all claims were present in the application before the Office issued an action on the merits of the claims. MPEP 818.02(c) does not apply because to date there have been no claims cancelled after an action on the merits. MPEP 821.03 does not apply because no claims have been added after an action on the merits. Applicant does NOT base its traverse on the grounds that the species identified in the Office's "constructive election" ruling are not patentably distinct. Rather, the traverse is based on the grounds that the "constructive election" ruling is not supported by the developmental history of the present application, and so is improper and without basis in the Office's own procedural manual and, thus, should be withdrawn.

Appln No. 10/004,046

Amdt date May 26, 2004

Reply to Office Action of November 26, 2003

Therefore, Applicant submits that the ruling in the action of November 26, 2003 has no basis in the facts of this application, is improper, and should be withdrawn.

However, in the interest of advancing the prosecution of this application, the Action of November 26, 2003 is treated as requiring an election between the species of Figures 3, 4 and 7 identified at item 5 on page 6 (Detailed Action) of that action. Applicant elects the species of FIG. 7 on which claims 60-74, 95, 96, 99-109, 111, 112, 136, 144, 193-194, 197-199, 201, 227-232, 234, 235, 238-240 and 242 are readable.

In the Office Action the Examiner has characterized the instant specification as disclosing three different embodiments as shown in FIG. 3, FIGS. 4-6 and FIG. 7. The Examiner states, in Section I, page 3, paragraph #2, "That is, it is unclear if the removable hard disk of FIG. 4 actually recorded received video signals or whether it served only as an input means for pre-recorded hard disks provided, for example, from the recording system of FIG. 3." The Examiner's attention is directed to col. 12, lines 14-18¹ of the specification. As stated therein "It is important to note that although FIG. 4 shows only one set of each type of signal inputs, the system is capable of handling signals simultaneously from a plurality of sources and in a variety of formats."

Note also Column 4, lines 44-50, "Production effects may be conducted in whatever image size is appropriate, and then re-sized for recording. Images are recorded by writing the digital

¹ All references to the specification of the pending application are to the column number and line ranges in the specification of U.S. Patent No. Re 38,079.

Appln No. 10/004,046

Amdt date May 26, 2004

Reply to Office Action of November 26, 2003

data to storage devices employing removable hard-disk drives, disk drives with removable media, optical or magneto-optical based drives, or tape-based drives, preferably in compressed-data form."

With respect to FIG. 7, the embodiment illustrated therein is characterized by the Examiner as not appearing "to receive a plurality of video signal (sic) having a plurality of video signal formats at any given time." There is no requirement that the system of FIG. 7 must receive signals from all of the sources shown in FIG. 7 at any given time or that the input signals are limited to being received only from these sources. The Examiner's attention is directed to col. 13, lines 27-41. As stated therein, "FIG. 7 shows an implementation involving one possible choice for image sizes, aspect ratios and frame rates to provide a universal television production system. As shown, signals are provided from any of several sources including conventional broadcast signals 210, satellite receivers 212, and interfaces to a high bandwidth data network 214. These signals would be provided to the digital tuner 218 and an appropriate adapter unit 220 for the data network or "information superhighway" before being supplied to the decompression processor 222. The processor 222 provides any necessary data decompression and signal conditioning for the various signal sources and preferably is implemented as a plug-in circuit board for a general purpose computer, though the digital tuner 218 and the adapter 220 optionally may be included as part of the existing hardware." (emphasis added) Note also decompression is provided only when and if needed.

Appln No. 10/004,046

Amdt date May 26, 2004

Reply to Office Action of November 26, 2003

In paragraph I.2 on page 4 of the Office Action the Examiner notes that "the system of FIG. 4 appears to be the only one of three disclosed systems that operated to receive and process a plurality of video signals of a plurality of different video signal formats..." The Office Action goes on to characterize the essential components or elements of the system of FIG. 4. As has been demonstrated above, the system of FIG. 4 is not the only one of the three disclosed systems that may operate to receive and process a plurality of video signals of a plurality of different video signal formats.

Claim 1 has previously been cancelled from this Application by a preliminary amendment dated October 24, 2001.

At the bottom of page 6 the Examiner states that the "Original claim 1 and claims 252-254 appear to be directed solely to the species of FIG. 4." Applicant respectfully disagrees and suggests that the Examiner review this statement and in particular review it in light of FIG. 3. As has been indicated above, original claim 1 has already been cancelled from the Application. The paragraph goes on to state that "Applicant has constructively elected the species of FIG. 4 for prosecution on the merits to which the claims of the current application shall be restricted..." Again, it is submitted that since claims 252-254 are directed to the species of FIG. 3, not FIG. 4, this restriction is inapposite. Further as indicated above, Applicant, in the interest of advancing the prosecution of this Application, elects the species of FIG. 7 for further prosecution. In terms of elected vs. non-elected claims, Applicant traverses the characterization of claims 74, 112, 201,

Appln No. 10/004,046

Amdt date May 26, 2004

Reply to Office Action of November 26, 2003

103, 104, 109, 235, 238-240 and 242 as being non-elected and submits that such claims should be examined as prosecution of this application proceeds.

III.

It is indicated in paragraph 11 on page 10 of the Office Action that the claims recited therein are rejected under 35 USC 112, first paragraph, as failing to comply with the enablement requirement. In the discussion of paragraph 11 the Examiner takes issue with the nature of the graphics processor and suggests "that the technology needed to implement the described/claimed versatile "graphics processor" was not yet available at the time of filing." As the quotation from the specification (lines 62-66 of Column 9) indicates, the statement is that dedicated hardware for best performance will eventually become available. (emphasis added.) The important consideration is that the graphics processor is enabled. Graphics processors are disclosed and described in conjunction with FIG. 3, FIG. 4 and FIG. 7. Their versatility is well described therein. See, for example, Column 4, lines 8-39; Column 9, lines 11-40; Column 9, lines 64-67, Columns 10 and 11, Column 12, lines 1-13; and Column 13, lines 52-59. Graphics processors capable of performing one or more of the various functions referred to in the specification were available and were readily understood as being available by those skilled in the art. The Office Action also acknowledges the existence and enablement of a "graphics processor". See page 31, paragraph C of the Action in the text referring to Peters under the claim 39 heading.

Appln No. 10/004,046

Amdt date May 26, 2004

Reply to Office Action of November 26, 2003

Applicant's written description is in fact enabling of the graphics processors that are currently being claimed. Both hardware and software based implementations are described in detail in the locations in the specification referred to in the preceding paragraph. Graphics processors performing image manipulations as described in the Application such as frame rate change, pixel interpretation, compression, image resizing (Genesis Microchip, Inc.) and decompression were available as standard equipment from manufacturers such as Truevision, Quantel and Matrox Electronics Systems Ltd. All of the above functions are normal functions of graphic processors described in the specification and were readily available at the time of Applicant's invention. In terms of the IEEE definition, these processors are devices whose execution of a sequence of commands creates a display image.

As another example in this connection, the Examiner's attention is directed to col. 10, lines 65-67: "Commercial standards - converters are available to perform this function, however, from companies such as Snell and Wilcox."

The term "graphics processor" is fully explained and its meaning fully delineated by reference to the sections of the specification referred to above.

The Examiner correctly states in paragraph 2.b. (second reference) on page 4 of the Office Action that the written description of the application describes the graphics processor using reference numeral 116 and correctly states that there is no reference numeral 116 shown in Figure 4. The Examiner correctly notes, as is clear from the written description, that

Appln No. 10/004,046

Amdt date May 26, 2004

Reply to Office Action of November 26, 2003

reference numeral 116 refers generally to the entire rectangle specified collectively by numerals 120, 134, and 128, and the box labeled "graphics processor."

Referring now to Paragraph 12 of the Office Action.

The claims listed in Paragraph 12 of the Office Action have been rejected under 35 USC 112 second paragraph "as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention."

This paragraph first refers to claim 1 and Applicant again notes that since claim 1 is cancelled no response is needed.

With respect to claim 39, lines 5-7 the Examiner's comment on page 12 of the Office Action is well taken. Note that claim 60 for example provides that the digital video component of the video information was formed by converting an input video program having input format with no added redundant frames or fields. With respect to claim 52, this claim is non-elected as is claim 39.

Referring now to Paragraph 13 of the Office Action.

In paragraph 13 the recited claims have been rejected under 35 USC 112 first paragraph "as failing to comply with the written description requirement. The claim(s) contain subject matter that was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors at the time the application was filed had possession of the claimed invention."

Appln No. 10/004,046

Amdt date May 26, 2004

Reply to Office Action of November 26, 2003

Referring now to Paragraph 13.a.

The meaning of the term "graphics processor" is again questioned in this paragraph. As has already been indicated above, the term refers to an element or combination of elements capable of image manipulation. See previous comments relating to Paragraph 11 of the Office Action.

Applicants are entitled to the use of their own definition, as long as it is consistent within the disclosure and is not entirely contrary to common usage. See for instance the discussion in Lear Sigler, Inc. v Aeroquip Corp., 73 F2d 881,221 USPQ 1025, 1031 (Fed Cir 1984).

Referring now to Paragraph 13.b.

A question is raised in the paragraph as to where there is support in the disclosure as originally filed for "means to receive ...a plurality of display formats." It again should be noted that claim 1 has been cancelled and thus the "means plus function" type of claim format no longer appears in the application. Nevertheless, in response to the request for clarification, the Examiner's attention is directed to Column 13, lines 25-50 of the '079 disclosure, a section which has already been quoted in these remarks. Conventional broadcast signals, satellite receivers and interfaces to a high bandwidth data network all constitute different formats.

Appln No. 10/004,046

Amdt date May 26, 2004

Reply to Office Action of November 26, 2003

Referring now to Paragraph 13.c.

This paragraph raised the issue of support for a high capacity storage means in claim 1 and how the "receiving means" in lines 3-5 of claim 1 is distinguished in the disclosure from the "high capacity video storage means" recited in line 18 of claim 1. It is submitted that this question is moot in light of the cancellation of claim 1 and the absence of this combination of elements in the claims elected herein for prosecution. Referring to FIG. 7 and the recited disclosure, internal hard disk drive unit 236 and removable hard disk drive unit 238 are examples of high capacity magnetic storage media. Receivers are shown at 210, 212 and 214.

Referring now to Paragraph 13.d.

It does not follow that the disclosure of the "graphics processor" necessarily means that the embodiment of FIG. 4 is the only multiformat audio/video production system. This characterization is equally applicable to FIG. 7, for instance. (See Column 13, lines 52-56) For a disclosure of the "multiformat audio video production system" capable of storage of a program in production format in high capacity storage means, the Examiner's attention is directed to Column 13, lines 45-50.

Referring now to Paragraph 13.e.

As the paragraph is understood, it seeks reference to portions of the disclosure referring to a "digital audio component" and a "digital video component" and "obtained by converting an input format with no redundant frames or fields."

Appln No. 10/004,046

Amdt date May 26, 2004

Reply to Office Action of November 26, 2003

Attention is directed to the discussion in Column 4, lines 8-13 and lines 60-67. See also Column 12, lines 6-13; Column 9, lines 41-47; Column 12, lines 26-33 and Fig. 6; Column 4, lines 33-39; Column 6, lines 29-31; Figs. 2a, 2b, 2c and 3.

Referring now to Paragraph 13.f.

The disclosure as originally filed discloses and describes, as an example in Fig. 7, input signals (analog) from a source of conventional broadcast signals and from a satellite. Analog signals, by definition, have no pixel dimensions. See also Column 12, lines 26-33 and Fig. 6; Column 4, lines 33-39; Column 6, lines 29-31; Figs. 2a, 2b, 2c, and 3. Applicant notes further that claims 37, 58, and 93 are non-elected.

Referring now to Paragraph 13.g.

See the response to paragraph 13.e.

Referring now to Paragraph 13.h.

Responding to this paragraph, Applicant notes that claims 39 and 151 are non-elected and when pursued will be amended appropriately. With respect to claims 60 and 74, these claims recite that "...the digital video component having been formed by converting input video information having an input format with no added redundant frames or fields." (emphasis added)

It is submitted that these claims as currently presented refer to the video signal inputs prior to conversion to the common intermediate format. See also Column 12, lines 26-33 and

Appln No. 10/004,046

Amdt date May 26, 2004

Reply to Office Action of November 26, 2003

Fig 6; Column 4, lines 33-39; Column 6, lines 29-31; Figs. 2a, 2b, 2c and 3.

Referring now to Paragraph 13.i and 13.j.

Applicant has previously traversed the Examiner's characterization of claim 39 relating only to FIG. 4 since this claim applies with equal validity to FIG. 7. However, since claim 39 is non-elected, it appears that for purposes of the response to the Office Action, the discussion can be reserved to future prosecution.

Referring now to Paragraph 13.k.

This paragraph questions the location in the disclosure of a "system for viewing video information stored in a removable high capacity storage medium" and an "input device" which is "configured to read video information form the storage medium." For the disclosure the Examiner's attention is directed to FIG. 4, removable hard disk 104 and, for example, video interface 120 and the attendant discussion in the specification. See also FIG. 7, removable hard disk 238 and graphics processor 242, Column 5, lines 20-26; Column 9, lines 20-25; Column 12, lines 35-41; and Column 13, line 66 - Column 14, line 11.

Referring now to Paragraph 13.l.

In response to the request for clarification in this paragraph, the response to the preceding paragraph is equally applicable. Applicant further notes that claim 75 is non-elected.

Appln No. 10/004,046

Amdt date May 26, 2004

Reply to Office Action of November 26, 2003

Referring now to Paragraph 13.m.

This paragraph presents a request for clarification similar to paragraphs 13.k and 13.l with further reference to a digital video signal component having a compressed digital format. Reference is directed to Column 4, lines 46-50 "...preferably in compressed data form" Compression is also disclosed at Column 5, lines 20-26 and Column 9, lines 20-25.

Referring now to Paragraph 13.n.

For the response to the request for clarification in this paragraph, the Examiner's attention is directed to the discussion herein with respect to paragraph 13.k.

Referring now to Paragraph 13.o.

For the response to the request for clarification in this paragraph, reference is made to the discussion in response to paragraphs 13.l and 13.m.

Referring now to Paragraph 13.p

The request in the paragraph is for reference in the disclosure to an output format having a frame rate less than 24 frames per second. There are several references in the specification to different frame rates and frame sizes and different output formats. In this connection, the Examiner's attention is directed to the portion of the disclosure in Column 12, lines 26-34.

Appln No. 10/004,046

Amdt date May 26, 2004

Reply to Office Action of November 26, 2003

Referring now to Paragraph 13.q.

This paragraph requests reference to the specification wherein the elements in claim 151, digital video component having a frame rate of substantially 24 frames per second and an image dimension of less than or equal to 1920 by 1080 pixels are disclosed. Attention is directed to the disclosure at Column 5, lines 47-52 referring to the several proposed HDTV formats under consideration by the Advanced Television Study Committee (ATSC). Note also that Claim 151 is non-elected.

Referring now to Paragraph 13.r.

In response to the request for clarification in this paragraph, Applicant notes that the article of manufacture claims 161 and 243 are non-elected and hence for purposes of the present application, the discussion can be reserved to future prosecution.

Referring now to Paragraph 13.s.

For a disclosure of an HDTV output at 24 frames per second, attention is directed to column 12, lines 26-42 and in particular the last sentence, "In addition, output signals at 24 fps are available for use in a film recording unit 168." See also Column 5, lines 47-55. It is noted again that claim 161 is non-elected.

Referring now to Paragraph 13.t.

Reference in the disclosure to the range of "less than or equal to about 1920x1080 pixels" is requested. It is submitted

Appln No. 10/004,046

Amdt date May 26, 2004

Reply to Office Action of November 26, 2003

that the specification has numerous references to pixel dimensions of many different sizes including dimensions less than 1920x1080. It is also noted that claim 26 is non-elected.

Referring now to Paragraph 13.u.

This paragraph seeks reference in the disclosure to image dimensions of "greater than or equal to about 640x480 pixels." As indicated in the response to the previous paragraph, the specification has numerous references to different pixel dimension ratios. Attention is directed to Column 14, lines 1-8. It is noted that claims 164, 179, 196, and 213 are non-elected.

Referring now to Paragraph 13.v.

For horizontal resolution of greater than 600 lines, attention is directed to the disclosure at Column 6, lines 47-50. It is further noted that claims 168, 183, 200, 217, 233, and 255 are non-elected.

Referring now to Paragraph 13.w.

It is noted that claims 169, 184, 201, and 218 are non-elected. With respect to claim 234 and to the requested reference in the disclosure for the recited output image format having a frame rate that is "an integer multiple of 24, 25, or 30 frames per second", attention is directed to Column 10, line 36; Column 11, lines 58-62;; and Column 12, lines 36-40

Appln No. 10/004,046

Amdt date May 26, 2004

Reply to Office Action of November 26, 2003

Referring now to Paragraph 13.x.

In this paragraph, a reference in the disclosure to "memory module is requested. That disclosure is found in Column 8, lines 66-67. It is also noted that claims 177 and 211 are non-elected.

IV.

Applicant Traverses The Rejection of Elected

Claims 60-67, 70-73, 111, 193-194, 197-199, and 201

The Examiner has rejected elected claims 60-67, 70-73, 111, 193-194, 197-199, and 201, under 35 U.S.C. 103(a) as being unpatentable over Peters, for the same reasons that were set forth for claim 39 of the application, in view of Dorricott and Frederikson. As an initial matter, it should be noted that by inadvertent typographical error, claim 39 of the application has a different scope than that of claim 60. Claim 39 by inadvertence, lacks the limitation, contained in claim 60, that the video information has "a digital video component having been formed by converting input video information having an input format with no added redundant frames or fields." Claim 39 states that the "digital video component [has] an intermediate format having a frame rate of substantially 24 frames per second with no added redundant frames or fields." The Applicant inadvertently failed to state in claim 39 that the "non-redundant frames/fields" limitation applied to the input video information, rather than to the video information in the intermediate format, which was not intended. Therefore, the Examiner's reasons for rejecting claim 39 over Peters are based on Applicant's inadvertence and those reasons for rejecting

Appln No. 10/004,046

Amdt date May 26, 2004

Reply to Office Action of November 26, 2003

claim 39 are inapplicable to claim 60. Claim 39 is not elected, however, Applicant will correct claim 39 by amendment when it is examined.

In the Office Action, the Examiner misconstrues the limitation of claim 60 which requires that the video information has "a digital video component having been formed by converting input video information having an input format with no added redundant frames or fields." The Examiner states at paragraph 13.h. of the Office Action on page 15 that "the 'non-redundant field/frame' limitation of the claims was introduced by applicants in order to distinguish the 'real' 60 Hz video signal inputs of their alleged invention from the 'telecine-derived' 60 Hz video signal inputs of the prior art (note paragraph 3 of this Office Action)." In paragraph 3 of the Office Action, the Examiner states that "applicants added limitations to the claims which indicated that the video signals, being converted into the 24 frame per second frame rate by the claimed invention, had no 'redundant fields/frames'; i.e. that the video signals being converted to the 24 fps frame rate for processing were 'original'/'live' video signal productions and not those produced by conventional telecine."

The Examiner's interpretation of the "non-redundant field/frame" limitation is inaccurate. The Examiner mischaracterizes this limitation in the claims of U.S. Patent No. Re 38,079. The Examiner states that "the video signals, being converted into the 24 fps frame rate by the claimed invention, had no redundant frames/fields." The claims of the '079 patent do not require that the input video signals be

Appln No. 10/004,046

Amdt date May 26, 2004

Reply to Office Action of November 26, 2003

converted into a 24 fps rate. The claims state that the input video program is converted into an intermediate production format for storage on the high capacity storage medium. See, claims 1, 14, and 20. The intermediate format has a frame rate of 24 fps. The claims do not require that the conversion include converting the frame rate of the input programs to 24 fps -- this may or may not occur. Claim 20 specifically states that the conversion to the intermediate format occurs only when the program is not received in the intermediate format.

The Applicant first introduced the "non-redundant fields/frames" limitation to the claims during the prosecution of the parent application, which issued as U.S. Patent No. RE 38,079. In introducing this limitation to the claims, Applicant stated that the limitation was intended to overcome the fact that the Peters system only accepts input having redundant fields or frames created following a telecine conversion:

Claim 1 has been amended to include the limitation that the means to receive a signal representative of an input program having audio and video components without redundant frames or fields, a limitation which would not have been obvious in view of the Peters apparatus, which only accepts input programs having redundant frames or fields. Peters only considers NTSC (or PAL) input programs derived from 24 fps film source materials following a telecine conversion. This conversion necessarily adds redundant frames prior to storage in the intermediate format, requiring the masking operations described above.

Appln No. 10/004,046

Amdt date May 26, 2004

Reply to Office Action of November 26, 2003

The batch processing of Peters, as separate from the field capture step, suggests that once the input fields have been digitized and stored, the system only performs two specific functions. The first is as an off-line editing system to develop an edit decision list from stored video frames (representative of a 24 fps film-rate signal derived through a source which is comprised of a series of images that include redundant fields). The second is as a video program playback device that simulates the behavior of a telecine machine by replaying stored frames at a slightly modified playback rate (23.97 fps instead of 24 fps, just as a traditional telecine functions in NTSC playback). This reintroduces redundant fields that exactly match the sequence contained in the original NTSC source recording.

(March '13, 2000 Amendment, at p. 7).

As evidenced by the Applicant's remarks in the above-quoted remarks of March 13, 2000 the "non-redundant fields/frames" limitation indicates only that the video programs were not those produced by a conventional telecine, i.e., those in which redundant fields or frames are added to a 24 fps film input to create an NTSC signal as disclosed in Peters. Applicant's remarks do not limit the input to 30 fps "live" video, as implied by the Examiner, to the exclusion of all other input formats (except those inputs having added redundant fields/frames from 24 fps film source materials following a telecine conversion). Thus, the "non-redundant fields/frames" limitation may include "live" video programs produced by a

Appln No. 10/004,046

Amdt date May 26, 2004

Reply to Office Action of November 26, 2003

camera or the video programs produced by a telecine wherein no redundant fields or frames are added. (See, e.g., Col. 12, lines 26-34 and Figure 6; Column 4, lines 33-39; Column 6, lines 29-31; Figures 2a, 2b, 2c, and 3.) The "non-redundant fields/frames" limitation may also include input video programs having a frame rate other than 30 fps, such as video programs having a frame rate of 24 fps. (Id.)

The Examiner's other grounds for rejecting claim 39 are also without merit. For example, the Examiner argues that the recited "graphics processor" is given little to no patentable weight because (1) it appears to be repugnant to its conventional meaning, and (2) it is so overly broad that, as described, it encompasses "collection of conventional video standards converters." [sic] (paragraph 25 at page 29 of the Office Action). However, Applicant is not claiming a "graphics processor" in a vacuum, but rather, a graphics processor that is not only described in detail in the specification, but which is claimed in conjunction with the system elements of claim 60. For example, as stated in claim 39, "the graphics processor is in data communication with the high-capacity storage medium, and configured to convert the digital video component in its intermediate format to output video information having an output format, the output format having a frame rate that is different from the frame rate of the intermediate format; the graphics processor further being configured for data communication with a display device for viewing the video output information in the output format." This is precisely what the "graphics processor," as disclosed by Applicant does, and the Examiner is

Appln No. 10/004,046

Amdt date May 26, 2004

Reply to Office Action of November 26, 2003

reminded that an applicant is entitled to be "its own lexicographer." See e.g., Column 4, lines 8-39; Column 9, lines 11-40; Column 9, lines 64-67; Columns 10 and 11, Column 12, lines 1-13; and Column 13, lines 52-59.

The Examiner takes "Official Notice" that specialized general-purpose computer configurations utilized (1) some type of data compression, such as MPEG or JPEG, and (2) conventional disc storage, citing paragraph 21 of the Office Action, above. Applicants are not claiming to have invented a "specialized general-purpose" computer utilizing data compression or conventional disc storage technology. Rather, Applicants have invented a combination of elements which comprise a system, as defined in claim 60.

Claim 60 is distinguished over Peters in view of Dorricott and Frederiksen. Peters discloses a system for electronically editing film. (Peters, Col. 1, lines 10-11).² Peters' system is intended to provide film editors with the ability to edit a digital representation of the film "as if it were film, i.e., running at film speed, as is preferred by most film editors." (Peters, Col. 2, lines 51-53). The digital representation taught by Peters must be reconstruction of the assigned film sequence. (Peters, Col. 7, lines 10-14). Peters recognized that, to accomplish this goal, there is an inherent problem -- namely, that, when the film is transferred to an analog electronic format using a conventional telecine, the telecine modifies the film format by changing the speed of the video and by adding redundant fields. (Peters, Col. 4, lines 11-15).

² All references to Peters herein are to U.S. Patent 5,930,445.

Appln No. 10/004,046

Amdt date May 26, 2004

Reply to Office Action of November 26, 2003

Peters' system therefore requires that the video in the analog electronic format created by the telecine be modified before it can be converted and stored in a digital 24 fps format. In the case of NTSC output from the telecine, the speed of the NTSC video must be increased from 29.97 fps to 30 fps and the redundant fields must be removed. (Peters, Col. 6, line 66 - Col. 7, line 2). Accordingly, Peters requires that the system note the location of the redundant fields which are to be removed using a "capture mask." Redundant fields are assigned a capture value of "0" while all other fields are assigned a capture value of "1". (Peters, Col. 7, lines 2-10). Only fields with a capture value of "1" are captured for compression and storage in a digital format; fields with a capture value of "0" are ignored, thus reconstructing the original film frame sequence from the video frame sequence. (Peters, Col. 7, lines 10-14). Because claim 60 of the application is limited to include only input video information having a format with no added redundant frames or fields, none of these processing steps is required in claim 60 (or its dependent claims).

In rejecting claim 60, the Examiner contends that claim 60 only differs from Peters in that "the stored 24 fps video was derived from an input signal which had no redundant fields/frames (e.g., from 'live' 30 fps video)." The Examiner concedes that claim 60 differs from Peters, because "in contrast, the 24 fps video that was stored on the disk (@ 32) of Peters et al. was derived from an input video signal of a telecine origin, and therefore had redundant field/frames." The Examiner contends that, while the system of Peters "only

Appln No. 10/004,046

Amdt date May 26, 2004

Reply to Office Action of November 26, 2003

discussed the processing of video signals of telecine scanning origin, those of ordinary skill in the art at the time of Applicant's invention would have known that it was typical for such video/film production/post-production operations to have involved the processing of video signal segments from a wide range of sources and formats including, but not limited to 'live video.'"

The Examiner supports this argument by referring to his discussion of Dorricott in paragraph 21 of the Action. The reference to Dorricott in paragraph 21 of the Action, however, does not support this argument. In paragraph 21, the Examiner cites Dorricott for the proposition that "[i]n video signal production systems in which video signals are combined and/or manipulated, it is necessary that any signals to be combined are of, or are converted to, [the] same format." (Dorricott, Col. 1, lines 22-25). Dorricott does not state, suggest, or imply that the input video feed disclosed by Peters -- telecined film having added redundant fields -- can be substituted with a "live" video feed, presumably without added redundant fields or frames.

Dorricott is further distinguished on the grounds that Dorricott functions by adding "phantom frames" to the input before storing in the intermediate format. In particular, the system of Dorricott et al. is designed for applications wherein phantom fields are added to a 24 fps input to make them compatible with 60 Hz output signals. This step is an integral part of the system of Dorricott and any method that arises out of it. In one of the embodiments of Dorricott, each frame of

Appln No. 10/004,046

Amdt date May 26, 2004

Reply to Office Action of November 26, 2003

the 24 fps input is repeated eight times, then motion-interpolated frames are intermixed through a step in which progressive frames are created. Claim 60 therefore distinguishes over Peters/Dorricott for this reason, because all embodiments of Dorricott require a 30 or 60 fps intermediate format, whereas in claim 60, the video information in the intermediate format has a frame rate of 24 fps. Even when the Dorricott system receives a program in a 24 fps source format, it is converted into a 30/60 fps intermediate format prior to further processing. Thus, in this respect, Dorricott et al clearly teaches away from the use of a 24-fps intermediate format of claim 60.

The Examiner further contends that "it would have been obvious to one of ordinary skill in the art to have modified the system disclosed by Peters with further format conversion circuitry to allow material from other sources/formats, e.g., including live video, to be converted into the compressed 24 fps intermediate digital format for processing by the Peters system." The Examiner contends that this argument is supported by Frederiksen (Col. 7, lines 3-12), which, according to the Examiner, shows that "the necessary format conversion of 'live' video to a compressed 24 fps format via the deletion of non-redundant frames was a known and conventional process."

The system disclosed by Peters cannot be so modified. The Examiner relies on Frederiksen at Col. 7, lines 3-12. Frederiksen teaches that "live" video having a frame rate of 30 fps does not contain any redundant frames. If any frames are removed from an input of "live" video at 30 fps, this means that

Appln No. 10/004,046

Amdt date May 26, 2004

Reply to Office Action of November 26, 2003

non-redundant frames would be removed. It would be impossible to ever re-create the original 30 fps "live" video if any non-redundant frame is removed. Peters, however, teaches away from removing non-redundant frames simply to make a 24 fps digital format, because the digital format of Peters is intended to re-create the original frame sequence of the source film. (Peters, Col. 7, lines 13-14). If non-redundant frames of a 30 fps "live" video are removed to create a 24 fps digital version of the video, then the original frame sequence is not obtained and it can not be re-created, because the removed non-redundant frames will have been discarded by the system.

In rejecting claims under 35 U.S.C. §103, the Examiner must provide a reason why one having ordinary skill in the pertinent art would have been led to combine the cited references to arrive at Applicants' claimed invention. There must be something in the prior art that suggests the proposed combination, other than the hindsight gained from knowledge that the inventor choose to combine these particular things in this particular way. Uniroyal Inc. v. Rudkin-Wiley Corp., 837 F.2d 1044, 1051, 5 USPQ2d 1434, 1438 (Fed. Cir. 1988). The Examiner is also required to make specific findings on a suggestion to combine prior-art references. In Re Dembeczak, 175 F.3d 994, 1000-01, 50 USPQ2d 1614, 1617-19 (Fed. Cir. 1999).

In this case, there is no motivation or justification to combine Peters with Dorricott or Frederiksen and the Examiner has not provided any motivation or justification in the prior art. Applicant has recited distinguishing features of the cited Peters, Dorricott, and Frederikson references and showed why the

Appln No. 10/004,046

Amdt date May 26, 2004

Reply to Office Action of November 26, 2003

references cannot be combined. This is sufficient to overcome the Section 103 rejection.

The Examiner's statement to the effect that modifications of the prior art to meet the claimed invention would have been "'well within the ordinary skill of the art at the time the claimed invention was made'" because the references relied upon teach that all aspects of the claimed invention were individually known in the art is not sufficient to establish a *prima facie* case of obviousness without some objective reason to combine the teachings of the references. Ex parte Levengood, 28 USPQ2d 1300 (Bd. Pat. App. & Inter. 1993). See also In re Kotzab, 217 F.3d 1365, 1371, 55 USPQ2d 1313, 1318 (Fed. Cir. 2000). Moreover, if a proposed combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. In re Ratti, 270 F.2d 810, 123 USPQ 349 (CCPA 1959). In this case, forcing Peters et al. to consider or convert inputs other than those actually disclosed would render the system of Peters et al. incompatible with its intended purpose, thereby defeating *prima facie* obviousness.

V.

Applicant Traverses the Rejection of Elected

Claims 95, 96, 99-102, 105-108, 144, 227-232, and 234

Elected claims 95, 96, 99-102, 105-108, 144, 227-232, and 234 stands rejected under 35 U.S.C. §103 over Peters "for the same reasons that were set forth for claims 40 . . . above."

Appln No. 10/004,046

Amdt date May 26, 2004

Reply to Office Action of November 26, 2003

The Examiner rejected claim 40 under 35 U.S.C. §103(a) over Peters for the same reasons that were set forth for claim 39. Accordingly, Applicant interprets the rejection of claim 95 as being identical to that presented for claim 39. However, claims 95 and 39 are so different that the common rejection cannot be used. Claim 95 is a method, whereas claim 39 is a system; claim 39 includes the limitation of "a signal receiving device" and other specific apparatus, whereas claim 95 includes the steps of reading, converting, and viewing video components or information. As discussed above, claim 39, by Applicant's inadvertence lacks the limitation, contained in claim 95, that the video information has a "digital video component resulting from the conversion of input video information having an input format with no added redundant frames or fields." Claim 39 merely states that the "digital video component [has] an intermediate format having a frame rate of substantially 24 frames per second with no added redundant frames or fields."

The Examiner acknowledges that Peters does not disclose the limitation of claim 95 that the video information has a "digital video component resulting from the conversion of input video information having an input format with no added redundant frames or fields." (See, e.g., paragraph 27. B on page 32 of the Office Action). The Examiner offers no other reference or argument as to how this missing limitation of claim 95 is found in the prior art, and therefore the rejection is traversed.

Based upon the foregoing amendments and comments, Applicant believes all claims are now in condition for allowance.

Appln No. 10/004,046

Amdt date May 26, 2004

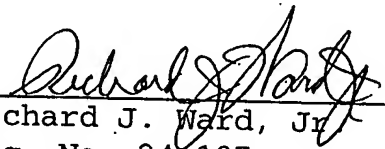
Reply to Office Action of November 26, 2003

Questions regarding this application may be directed to the undersigned attorney at the telephone number provided.

Respectfully submitted,

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